



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/191,708	11/13/1998	BRIJ BHUSHAN GARG	L0012/7004	8933

26291 7590 12/18/2003

MOSER, PATTERSON & SHERIDAN L.L.P.  
595 SHREWSBURY AVE  
FIRST FLOOR  
SHREWSBURY, NJ 07702

EXAMINER

LY, ANH VU H

ART UNIT PAPER NUMBER

2667

DATE MAILED: 12/18/2003

20

Please find below and/or attached an Office communication concerning this application or proceeding.

plc

# Office Action Summary

Application No.

09/191,708

Applicant(s)

GARG ET AL.

Examiner

Anh-Vu H Ly

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. This communication is in response to applicant's amendment filed October 20, 2003. The proposed amendment to the claims has been entered. Claims 1-22 are pending.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindberg (US Patent No. 6,366,579) in view of Sharony et al (US Patent No. 5,495,356). Hereinafter, referred to as Lindberg and Sharony.

With respect to claims 1-5, Lindberg discloses in Figs. 11-12 a space/time switching unit (apparatus for switching data from any of a plurality of inputs to any of a plurality of outputs) wherein (col. 18, lines 41-48) the data words (data blocks containing a fixed number of bits data) in the received time slots are disassembled to bit level such that each data word is divided into a number of bits BIT0 to BIT7. Each bit (bit-pack comprising 1-bit) is then distributed to a respective row of speech stores SS of that row (apparatus for receiving a plurality of respective input bit packs organized in a combination of input data rails and time slots). Herein, each bit is considered as a bit-pack by the examiner and wherein, each bit-pack contains only 1 bit (each data block comprising "O" bit packs containing a number of bits "P", where O and P are integers). The multiplexors 8/1 MUXs controlled by the associated control stores CS are

Art Unit: 2667

operative to output selected bits from the speech stores (apparatus for selecting any of the respective input bit packs from any of the rails in any of the time slots). Lindberg does not disclose an apparatus for conveying said selected bit pack to any output data position within a combination of output data rails and time slots. Sharony discloses (col. 2, lines 1-17 and Fig. 3) a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one or all of N outputs (apparatus for conveying the selected bit pack to any output data position within a combination of output data rails and time slots). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an apparatus for broadcasting the selected input data to any output channels as a combination of space/time channels in Lindberg's system, as suggested by Sharony, to effectively broadcasting data to a plurality of destinations simultaneously.

3. Claims 6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharony et al (US Patent No. 5,495,356) in view of Lindberg (US Patent No. 6,366,579).

With respect to claims 6, 11, and 16-22, Sharony discloses in Fig. 3, a multidimensional switching network for broadcasting any of the input data to a plurality of output channels. Sharony does not disclose wherein data formatted as data blocks containing a fixed number of bits of data, each data block comprising "O" bit packs containing a number of bits "P", where O and P are integers. Lindberg discloses in Figs. 11-12 a space/time switching unit wherein (col. 18, lines 41-48) the data words (data blocks containing a fixed number of bits data) in the received time slots are disassembled to bit level such that each data word is divided into a number of bits BIT0 to BIT7. Each bit (bit-pack comprising 1-bit) is then distributed to a respective row of

Art Unit: 2667

speech stores SS of that row. Herein, each bit is considered as a bit-pack by the examiner and wherein, each bit-pack contains only 1 bit (each data block comprising "O" bit packs containing a number of bits "P", where O and P are integers). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the technique of dividing input data into data blocks and disassembling each data block into individual bits and switching each bit individually in Sharony's system, as suggested by Lindberg, to broadcasting only the selected bits to the selected output channels. Sharony discloses in Fig. 3, a generalized switching network, wherein a plurality of selection blocks 32 are configured to broadcast data from one or more input channels to one or more output channels as a function of space dimension, wavelength dimension, and time slot dimension (M selection blocks, each configured to select a bit pack for a different one of the output positions). Further, Sharony discloses in Fig. 3, a generalized switching network, wherein data, arranged as time slots 35 (bit packs) and space connections 33 from  $m \times m$  blocks 31 (rails), are received at the  $n \times \ln$  blocks 32 (apparatus for receiving input data arranged as bit packs in T time slots on R rails. Further, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or N inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one of N outputs (apparatus for selecting data from any of the R rails and latching the selected data during a predetermined time slot to thereby select a bit pack of predetermined R and T values and conveying the selected bit pack to any output data position of predetermined T2 and R2 values).

Art Unit: 2667

With respect to claims 7 and 12, Sharony discloses in Fig. 3, each block 32 received input data from different  $m \times m$  star block 31 (a  $T2 \times R2$  output bit map configured for receiving a selected bit pack in each location from a different one of the  $M$  selection blocks).

With respect to claims 8 and 13, Sharony discloses in Fig. 3, each of  $n \times l_n$  block 32 is processed in parallel and wherein the  $n \times l_n$  block 32 broadcasts the selected input data to one or more output channels (a second  $T2 \times R2$  output bit map configured to be loaded in parallel from first output bit map).

With respect to claims 9 and 14, Sharony discloses (col. 2, lines 1-17 and Fig. 3) that a system in which an input and/or  $N$  inputs are connected to a passive broadcast medium that broadcasts an input and/or all the inputs to each one of  $N$  outputs (apparatus configured to arrange input bit packs as an array of  $T$  time slots on  $R$  rails and to convey output bit packs from the second  $T2 \times R2$  bit map on  $R2$  rails in  $T2$  time slots).

With respect to claims 10 and 15, Sharony discloses in Fig. 3, a plurality of input connections  $N-1$  and a plurality of output connections  $N-1$ . Sharony does not disclose that  $N=M=768$ . However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to configure such plurality of input and output connections to any number of input and output connections in Sharony's system, as a function of cost and complexity of the switching system.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

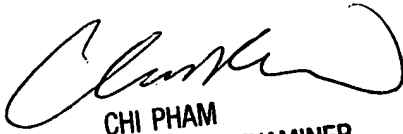
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Art Unit: 2667

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

avl

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 12/15/23